

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER R2-2002-0089

WASTE DISCHARGE REQUIREMENTS AND WATER QUALITY CERTIFICATION FOR:

**SANTA CLARA VALLEY WATER DISTRICT, LOWER GUADALUPE RIVER
FLOOD PROTECTION PROJECT, CITIES OF SAN JOSE AND SANTA CLARA,
SANTA CLARA COUNTY**

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board), finds that:

1. **Scope of Order:** This Order establishes requirements for the Lower Guadalupe River Flood Protection Project (hereinafter the Project) as described in Finding No. 6 below, to be constructed by the Santa Clara Valley Water District (hereinafter the Discharger).
2. **Application:** The Discharger applied to the Board on April 8, 2002, for Water Quality Certification under Section 401 of the Clean Water Act, and for waste discharge requirements (WDRs), or waiver thereof, under the Porter-Cologne Water Quality Control Act, for the Project. The Discharger has applied to conduct activities to provide 100-year flood protection along the lower Guadalupe River, a tributary to South San Francisco Bay.
3. **Purpose:** The Project proposes to modify previous flood control measures implemented in 1983 and 1995 on the lower Guadalupe River. These modifications would restore the flood conveyance capacity of the existing channel and provide additional capacity to convey flood flows of approximately 18,350 cubic feet per second (cfs) during a design flood event. Portions of the lower Guadalupe River will currently flood at discharges of 14,000 to 17,000 cfs.
4. **Project Need:** Since 1940, there have been 10 noteworthy floods of the Guadalupe River, the most recent ones in 1982, 1983, 1986, 1995, and 1998. The March 1995 flood was the largest, with instantaneous peak discharge (i.e., outflow rate) of 11,000 cfs at the Guadalupe gauging station, downstream of Los Gatos Creek.

The principal causes of this flooding were: (1) development practices have allowed development within the natural flood plain of the river system, and (2) development has occurred in a manner that increased the amount of land covered with impervious surfaces, thereby reducing natural percolation into the ground, increasing the rate of stormwater runoff and increasing peak flood flows, exceeding the capacity of the channel. Development in the watershed is estimated to have increased peak flows by 30 to 50% over pre-development peak flows.

5. **Related Projects:** Two additional flood protection projects have been designed upstream of the Project (**Appendix A**). They are the Upper Guadalupe River Flood Control Project, which is under development and is planned for completion in 2017, and the Guadalupe River Project (also known as the Downtown Project), permitted by Board Order No. 01-036, which is designed to convey 17,000 cfs through the downtown San Jose portion of the Guadalupe River upon completion in 2004. A Local Cooperative Agreement (LCA) between the U.S. Army Corps of Engineers, and the Discharger, requires the lower Guadalupe River to have enough flood capacity to convey flows from the Downtown Project upon completion. Without completion of the Lower and Downtown Projects, approximately 4,290 buildings would be flooded during a 100-year design flood event.
6. In addition, Board Order No. R2-2002-0028, for the Santa Clara Valley Water District Multi-Year Stream Maintenance Program (SMP), was adopted on February 27, 2002, to permit the Discharger to conduct stream maintenance activities throughout the Santa Clara Basin. Permitted activities include sediment removal, vegetation management, bank protection, and specific minor maintenance activities. Order No. R2-2002-0028 permits vegetation management and sediment removal from the lower Guadalupe River to provide additional flood protection capacity within the Project area. Impacts resulting from vegetation management and sediment removal within the Project area are considered temporary and will be mitigated according to the compensatory mitigation program described in Order No. R2-2002-0028.

Project Description, Setting and History

7. **Project Description:** The Project would involve modifications along 6.5 miles of channel between Interstate 880 upstream and the Union Pacific Railroad (UPRR) downstream (**Appendix B**). Additional work will be conducted downstream of the UPRR in Alviso Slough in the Baylands area. The Project has been divided into seven separate reaches. These reaches are (from upstream [south] to downstream [north]):

Reach A: I-880 to U.S. Highway 101 (U.S. 101),
Reach B: U.S. 101 to Trimble Road,
Reach C: Trimble Road to Montague Expressway,
Reach D: Montague Expressway to the Hetch Hetchy Aqueduct,
Reach E: Hetch Hetchy Aqueduct to Tasman Drive,
Reach F: Tasman Drive to State Route (SR) 237,
Reach G: SR 237 to the UPRR Bridge in Alviso.

The major elements of the Project include:

- a. Minor bank modification at the I-880 bridge approach in reach A;
- b. Construction of up to four grade control weirs in the reach A low-flow channel downstream of I-880, and grade control weirs and invert stabilization at U.S. 101, Trimble Road, and Montague Expressway;
- c. Construction of floodwalls in reach A upstream of U.S. 101, in reach F upstream of SR 237, and in reach G;
- d. Levee improvements through construction of levee raises in reaches A–F;
- e. Levee construction along Alviso Slough;
- f. Replacement of the SR 237 eastbound bridge to match the westbound bridge profile;
- g. Modification of stormdrain outfalls in reaches A, C, D, F, and G;
- h. Improvement of maintenance access roads, construction of new depressed maintenance roads in reach G, and construction of maintenance road undercrossings at bridges;
- i. Bridge scour protection and invert stabilization;
- j. Accommodation of future recreation trail extensions on levees in the Project area;
- k. Moderate to aggressive management of sediment and vegetation in reaches A–G;
- l. Pumping floodwaters from Cargill Salt Ponds A5, A6, A7, A8D, and A8W; and
- m. Construction of an overflow weir from Alviso Slough to the Cargill Salt Ponds.

Modifications, by reach, include the following:

Reach A will include floodwall construction; aggressive, moderate, and limited vegetation management, avoiding a 15-foot riparian buffer on either side of the low flow channel; planting riparian vegetation; up to four rock weir invert stabilization structures; minor bank stabilization; and new maintenance roads and ramps. A 2-foot floodwall will be constructed on top of both banks from Highway 101 to 98 feet upstream. Aggressive vegetation management in the first 394 feet downstream of I-880, excluding the overlapping U.S. Army Corps of Engineers shaded riverine aquatic (SRA) mitigation area, involves regular cutting of vegetation to a height less than 1 foot across the channel. Moderate vegetation management will occur from the Highway 101 Bridge crossing to the downstream end of the Project, and involves allowing trees to reach a height of 5 feet and herbaceous vegetation to reach a height of 1 foot. Limited vegetation management is permitted in the Corps' SRA areas on either side of the low flow channel and involves the removal of snags and debris only. Approximately 1.88 acres of riparian vegetation will be planted. Up to four rock weir stabilization structures will be installed at grade with the channel bed and banks, and are designed to provide fish passage at all flows. Minor bank stabilization will occur on the east bank between Highway 101 and 246 feet upstream of the Airport Island Bridge crossing and will include rock riprap and gabion slope protection. An 18-foot wide maintenance road on the top of bank will include an eastbank underpass for Airport Island Bridge, a westbank underpass at

Airport Parkway Bridge, east and westbank underpasses at Highway 101 and Skyport Drive Bridge and access ramps. All the Project maintenance roads and ramps will be surfaced with 0.5 foot of aggregate.

Reach B will include levee raising, levee setback, sediment and vegetation removal, planting riparian vegetation, maintenance access road improvements, and outfall modifications. Levees will be raised in some portions to 1 foot above existing elevations. Downstream of U.S. 101, the west bank levee will be set back an additional 80 feet from its current location. To maintain channel capacity, periodic sediment removal and moderate vegetation management will occur in the overbank areas. Periodic moderate vegetation management will occur in the overbank areas and inboard levee slopes, avoiding a 19.7-foot riparian buffer on either side of the low flow channel. Approximately 2.23 acres of riparian vegetation will be planted. Maintenance roads on top of the levees will be widened to meet the minimum width requirement of 18 feet. Maintenance access road improvements will include 0.5 feet aggregate surfacing. Nine outfalls will be protected in place, and one minor outfall will require modification.

Reach C will include minor levee raising, moderate vegetation management, sediment removal, planting riparian vegetation, and maintenance access road improvements. Levees will be raised approximately 1.6 feet on both banks. An approximately 100-foot wide overflow channel will be re-excavated on the east bench along side the low flow channel. Periodic sediment removal will occur in the re-excavated overflow channel to maintain capacity. Periodic moderate vegetation management will occur in the re-excavated overflow channel and inboard levee slopes, avoiding a 19.7-foot riparian buffer on either side of the low flow channel. Approximately 2.36 acres of riparian vegetation will be planted. Maintenance roads on top of the levees will be improved to meet the minimum width requirement of 18 feet, and a new depressed maintenance road will be constructed on both banks going under Trimble Road and Montague Expressway.

Reach D will include minor levee raising, vegetation and sediment removal, maintenance access road improvements, and outfall modifications. Levees will be raised 2.3 feet. Maintenance roads on top of the levees will be widened to meet the minimum width requirement of 18 feet. Two 34.8-foot wide overflow channels will be re-excavated to remove accumulated sediment in the overbank areas. Periodic sediment removal will occur in the re-excavated overflow channels to maintain capacity. Periodic minor vegetation management will occur in the areas outside the 100 to 150-foot riparian buffer areas. Only periodic limited vegetation management will occur in the riparian buffer area. Access ramps will be constructed along both banks at 328 feet downstream of Montague Expressway to the existing maintenance roads. Five major and five minor outfalls will require modifications.

Reach E will include minor levee raising, vegetation and sediment removal, maintenance access road improvements, and outfall modifications. Levees will be raised 1.6 feet. Two 34.8-foot wide overflow channels will be re-excavated to remove accumulated sediment in the overbank areas. Periodic sediment removal will occur in the re-excavated overflow channels to maintain capacity. Periodic minor vegetation

management will occur in the areas outside the 100 to 150-foot riparian buffer areas. Only periodic limited vegetation management will occur in the riparian buffer area. Maintenance roads on top of the levees will be widened to meet the minimum width requirement of 18 feet. New depressed maintenance roads will be constructed on both banks to provide access beneath Tasman Drive. Two major and two minor outfalls will require modifications.

Reach F will include replacing the eastbound span of SR 237, floodwall construction and levee raising, levee rehabilitation, vegetation management, maintenance access road improvements, and outfall modifications. The eastbound crossing at SR 237 will be replaced at a slightly higher elevation than the westbound crossing to increase flood capacity and freeboard. Because of lack of right of way needed to raise the existing levees, floodwalls will be constructed along the inboard levee hinge of the first 1,969 feet of levees. The remaining levees will be raised on average 2.3 feet. Depressed maintenance roads will be constructed to provide access beneath Tasman Drive. Sediment management has not been identified for this reach but aggressive vegetation management will be required at the beginning of each flood season outside of a 19.7-foot buffer along the low flow channel. Six major and two minor outfalls will require modifications.

Reach G, from SR 237 to the UPRR will include floodwall construction, vegetation and sediment removal, maintenance access road improvements including new construction of depressed maintenance roads, and outfall modifications. Because of the lack of right of way needed to raise the levees and to avoid wetland encroachment, floodwalls will be constructed on the inboard levee hinge. Sediment and vegetation will be removed to a depth of 3.28 feet for a width of 39.36 feet along the edge of the depressed maintenance roads. Aggressive vegetation management through herbicide application will be used to control the growth of dense tule vegetation in the remaining overbank areas. A 19.7-foot buffer along the low flow channel will be avoided. New 21-foot wide depressed maintenance roads will be constructed along the toe of the existing levees to provide access to sediment and vegetation management areas. Three major and two minor outfalls will require modification.

The Baylands portion of the Project involves vegetation management, levee construction, construction of an overflow weir opposite Alviso, levee repair, and pumping activities. Vegetation along approximately 738 linear feet of the east bank of Alviso Slough would be aggressively managed to lower floodwater elevations. An overflow weir would be constructed between Alviso Slough and the community of Alviso to prevent flooding. This overflow weir would be approximately 82 feet by 1,000 feet, and would be constructed on an existing levee that is currently overtopped during high flows. The weir would facilitate flows into Cargill Salt Ponds A5, A6, A7, A8D, and A8W. The southerly levee of Pond A6 contains three low spots that allow rare flood flows to enter Pond A6 from Ponds A5 and A7. These low spots, cumulatively, are approximately 1300 feet long by 40 feet wide and will be armored with articulated concrete mats and backfilled with native soil, to prevent levee failure due to the potential overtopping. A pumping plan will be implemented after flooding to de-water critical environmental areas in the salt ponds.

8. The Project will result in the excavation of approximately 183,100 cubic yards (cyd) of sediment. Of that, 72,000 cyd of sediment removal are already accounted for and regulated under the SMP's Board Order as described in Finding 6 of this Order. Of the remaining 111,200 cyd, 52,300 cyd will be removed from the bed and the remaining 58,500 cyd will be excavated from the banks to create riparian planting benches.
9. The Project will result in the discharge of approximately 235,400 cyd of fill to the lower Guadalupe River. Of that, approximately 26,000 cyd will be placed below ordinary high water and approximately 209,000 cyd will be placed above ordinary high water. Fill placed below ordinary high water will be used primarily for the construction of depressed maintenance roads, access ramps, rock weir stabilization structures, and slope protection. Fill placed above ordinary high water will be used primarily for levee raising, floodwalls, access ramps, and slope protection.
10. **Project Setting and History:** The Guadalupe River begins at the confluence of Alamitos Creek and Guadalupe Creek, just downstream of Coleman Road in San Jose. From its beginning, the River flows north approximately 14 miles through urbanized portions of San Jose and Santa Clara, eventually discharging into San Francisco Bay through Alviso Slough. At State Route (SR) 237, the River has a total drainage area of approximately 160 square miles. The lower Guadalupe River reaches receive runoff from an urbanized region, which comprises a steep upper watershed, an urban residential and light commercial zone, and a significantly developed and growing downtown commercial zone. Storm drainage from these areas and from pumped stormwater flows within the Project area are also currently discharged into the lower Guadalupe River, adding to the volume of runoff.

Because of the lower Guadalupe River's historical flooding potential, several flood-control projects have been implemented since the 1940s. In 1963, the historical River channel was modified in the "central zone" (an area encompassing the lower Guadalupe River). The modified channel, designed to convey a peak flood discharge of 12,000 cfs, consisted of a trapezoidal cross section with benches between the main channel and the constructed levees.

In 1983, the Discharger again improved the lower Guadalupe River channel by raising and setting back levees, excavating channels in the overbank (between the low-flow channel and new levee toes), and recommending maintenance to the design cross section of the channel. The 1983 improvements were designed to convey a peak flood discharge of 17,000 cfs from U.S. 101 to the UPRR Bridge. Implementation of a sediment maintenance plan began as part of this project. Subsequent channel maintenance activities varied from year to year until approximately 1992, when sediment management on the lower Guadalupe River was suspended because of regulatory limitations and concerns about biological effects.

In spring 1995, the Discharger assembled an emergency project team to investigate options to restore the lower Guadalupe River's flood capacity in the interim period before completion of a comprehensive, multi-objective planning study and capital

improvement project. An interim levee restoration project was constructed in summer 1995 to carry the Corps' design flood flow with 50% of the design freeboard. The project raised the lower Guadalupe River levees at selected locations between the UPRR Bridge and U.S. 101.

The current lower Guadalupe River is confined within flood-control levees. Both the low-flow and flood conveyance channels have been straightened and confined by the previous projects. As a result, the low-flow channel is incised throughout the reach, and sediment accumulates between the low-flow channel and the toe of the levees during annual high-flow events. Sediment deposition and vegetation growth in the channel have reduced the overall capacity of the lower Guadalupe River channel from its 1983 capacity of 17,000 cfs to approximately 14,000 cfs. In addition, ground subsidence within the reach has altered the river's longitudinal slope. The lower end of the reach also has daily tidal inflow and outflow that extends upstream of Tasman Drive and results in tailwater effects on the River flows. Fine sediments are deposited and hardened in these tidally influenced sections of the River, causing a continuing gradual decline in the River's hydraulic conveyance capacity.

Current planning for the Project has focused on restoring channel capacity to approximately 17,000 cfs to meet the terms of the Discharger's Local Cooperative Agreement (LCA) with the Corps, which was signed in March 1992. Under the terms of the LCA, the Discharger would operate and manage the lower Guadalupe River to provide the Corp's design flood capacity. Inability to meet the LCA requirements could delay or jeopardize completion of the Downtown Project. The Project was initiated as a Discharger study after the lower Guadalupe River was found to have inadequate capacity to carry design flood flows from the 1995 storm events.

The design flow rate shows an increase from 17,000 cfs at the upstream limit of the Project to 18,350 cfs at the downstream limit. The upstream flow rate matches the rate being used for the design of the Downtown Project, immediately upstream of the Project. Downstream increases in flow are based on estimates of existing and planned pump inflows.

Hydraulic analyses were conducted to determine the flow rate at which the lower Guadalupe River would overtop the levees along the various reaches. It was determined that flows of approximately 14,000 cfs would overtop the existing levees between Tasman Drive and Montague Expressway. Downstream of Tasman Drive, the River would overtop the levees at flow rates of approximately 17,000 cfs. Upstream of Montague Expressway, the overflow capacity gradually increases to 15,000 cfs and to 20,000 cfs between each of the successive upstream reaches.

The Downtown Project is scheduled for completion in 2004. Once the Downtown Project is completed, peak flood flows would pass in greater volume to the lower Guadalupe River. Because the lower Guadalupe River currently cannot convey the expected design flood event, floodway modifications would be designed and constructed

to ensure that the channel improvements are operated and managed to convey the design flood flow with a peak of 18,350 cfs at Alviso.

Environmental Documentation

11. **CEQA:** The California Environmental Quality Act (CEQA) requires all projects approved by State agencies to be in full compliance with CEQA and requires a lead agency to prepare an appropriate environmental document for such projects. The public comment period for the August 2001, Lower Guadalupe River Planning Study, Draft Environmental Impact Report (SCH# 2000042051) began on August 22, 2001, with an announcement of the availability of the Draft Environmental Impact Report (DEIR). The formal public comment period closed on October 12, 2001. On October 2, 2001, a public hearing on the DEIR was held before the Discharger's Board of Directors in the community of Alviso. On July 9, 2002, a public hearing on the Final Environmental Impact Report (FEIR) was held, and the Discharger's Board of Directors certified the FEIR. The Regional Board has considered the DEIR and the FEIR.

Beneficial Uses, Project Impacts and Mitigation

12. **Beneficial Uses:** The Board is charged with protecting beneficial uses from pollution and nuisance that may occur as a result of waste discharges in the San Francisco Bay Region. The potential and existing beneficial uses for lower Guadalupe River, South San Francisco Bay, and the Santa Clara Valley Groundwater Basin as designated in the Water Quality Control Plan for the San Francisco Bay Basin, 1995, and by the Clean Water Act, Section 401 Beneficial Use Assessment for the Lower Guadalupe River Flood Protection Project, dated April 2002, submitted by the Discharger include:

Lower Guadalupe River

- a. Cold Freshwater Habitat
- b. Freshwater Replenishment
- c. Groundwater Recharge
- d. Industrial Service Supply
- b. Fish Migration
- c. Preservation of Rare and Endangered Species
- d. Water Contact Recreation
- e. Noncontact Water Recreation
- f. Fish Spawning
- g. Warm Freshwater Habitat
- h. Wildlife Habitat

South San Francisco Bay

- a. Ocean, Commercial, and Sport Fishing
- b. Estuarine Habitat
- c. Preservation of Rare and Endangered Species
- d. Water Contact Recreation
- e. Shellfish Harvesting
- f. Fish Spawning

- g. Wildlife Habitat

Santa Clara Valley Groundwater Basin

- a. Municipal and Domestic Water Supply
- b. Industrial Process Water Supply
- c. Industrial Service Water Supply
- d. Agricultural Water Supply

13. **Permanent Beneficial Use Impacts:** Project construction will result in permanent impacts to the following beneficial uses of the lower Guadalupe River, South San Francisco Bay, and the Santa Clara Valley Groundwater Basin;

Lower Guadalupe River

Wildlife Habitat will be permanently impacted due to the construction of slope protection structures, outfall structures, increased footprint of existing levees, depressed maintenance roads, and the overflow weir in Alviso Slough.

South San Francisco Bay

No permanent impacts are expected to occur.

Santa Clara Valley Groundwater Basin

No permanent impacts are expected to occur.

14. **Temporary Beneficial Use Impacts:** Project construction will result in temporary impacts to the following beneficial uses of the lower Guadalupe River, South San Francisco Bay, and the Santa Clara Valley Groundwater Basin:

Lower Guadalupe River

Temporary impacts to these beneficial uses will result from construction-related activities and periodic routine maintenance :

- a. Cold Freshwater Habitat
- b. Fish Migration
- c. Preservation of Rare and Endangered Species
- d. Water Contact Recreation
- e. Noncontact Water Recreation
- f. Fish Spawning
- g. Warm Freshwater Habitat
- h. Wildlife Habitat

South San Francisco Bay

No temporary impacts are expected to occur.

Santa Clara Valley Groundwater Basin

No temporary impacts are expected to occur.

15. **Permanent Jurisdictional Impacts:** As shown in Table 1, Project activities will result in the permanent loss of 0.48 acre of nontidal freshwater wetlands, 2.48 acres of tidal freshwater wetlands, 0.51 acre of other waters of the State and U.S., and 2.16 acres of riparian habitat. Permanent impacts will result from road and levee construction throughout the Project area, and from weir construction and levee maintenance activities in the Baylands along Alviso Slough.
16. **Temporary Jurisdictional Impacts:** As shown in Table 1, Project activities will result in the temporary loss of 27.33 acres of wetlands and other waters of the State and U.S. Temporary impacts to wetlands and other waters will result from sediment removal and vegetation management activities throughout the Project area, and from weir construction and levee maintenance activities in the Baylands along Alviso Slough.

Table 1. Lower Guadalupe River Flood Protection Project Impacts

Waterbody	Permanent Impacts (acres)	Temporary Impacts (acres)
Nontidal Freshwater Wetlands	0.48	1.27
Tidal Freshwater Wetlands	2.48	23.94
Other Waters	0.51	2.12
Total	3.47	27.33

Habitat Type	Permanent Impacts (acres)	Temporary Impacts (acres)
Riparian	2.16	0

17. **Related Project Jurisdictional Impacts:** Project sediment removal activities approved under the SMP will result in temporary impacts to 6.3 acres nontidal freshwater

wetlands and 13.3 acres tidal freshwater wetlands within the limits of the Project. These impacts and associated mitigation will be addressed through implementation of the SMP, as described in Finding 6.

18. **Impact Avoidance and Minimization:** To avoid and minimize impacts to beneficial uses, wetlands, and other waters, the Discharger will implement the following plans and programs, and all measures included in the Lower Guadalupe River Flood Protection Project Mitigation and Monitoring Plan (MMP) (**Appendix C**):
 - a. Vegetation Protection Plan;
 - b. Stormwater Pollution Prevention Plan (SWPPP);
 - c. Erosion and Sediment Control Plan;
 - d. Spill Prevention and Response Plan;
 - e. Soil Management Plan;
 - f. Hazardous and Toxic Materials Contingency Plan;
 - g. Construction-Area Fish Management Program;
 - h. Construction period limits;
 - i. Measures to comply with the Migratory Bird Treaty Act;
 - j. Bay Area Air Quality Management District feasible control measures for emissions;
 - k. Traffic Management Plan;
 - l. Cultural Resources Management Plan;
 - m. Coordination with service providers before construction; and
 - n. Noise reducing construction practices.

In addition, the Discharger will implement the following plans developed and approved as part of the SMP, and will implement them as part of the Project:

- o. Best Management Practices Manual for the San Francisco Bay Area Region Multi-Year Stream Maintenance Program dated December 2001,
 - p. Final Sediment Characterization Plan for the Multi-Year Stream Maintenance Program dated December 2001, and
 - q. Final Self-Monitoring Program Water Quality Sampling Plan dated December 2001.
19. **Permanent Jurisdictional Impact Mitigation:** To compensate for unavoidable, permanent impacts to beneficial uses, wetlands and other waters, the Discharger will construct a minimum of 6.94 acres of wetlands at its tidal wetland mitigation site (formerly Cargill Salt Pond A4) located along South San Francisco Bay (**Appendix D**), and revegetate a minimum of 6.48 acres of riparian area within the Project, with appropriate native riparian species.
20. **Temporary Impact Mitigation:** To compensate for unavoidable, temporary impacts to beneficial uses, its wetlands and other waters, the Discharger will construct a minimum of 28.60 acres of wetlands at their tidal wetland mitigation site (formerly Cargill Salt Pond A4) located along South San Francisco Bay (**Appendix D**).
21. **Mitigation Monitoring Plan:** The MMP provides a full description of the Project compensatory mitigation components, measurable objectives for success, and monitoring protocols, and reporting requirements.

Adaptive Management

22. **Setback Levee Agreement:** The Discharger has not determined whether all opportunities to set back existing levees along the lower Guadalupe River have been identified. Goals of setting back existing levees include improved flood capacity and geomorphic function of the lower Guadalupe River at a given location within the Project, and a decreased need for channel modifications that can result in impacts to water quality and beneficial uses. Participants of the Guadalupe Watershed Integration Workgroup (GWIWG), representing federal, state, and local government agencies, the Discharger, and others (**Appendix E**) have agreed that opportunities may exist to set back existing levees and, that the Discharger should continue to investigate levee setback feasibility even after the Project is approved. In response to this agreement, the Discharger has modified the Project design to include setback levees in Reach B, to the maximum width available and has identified other open parcels adjacent to the lower Guadalupe River that could potentially accommodate the setting back of existing levees.

In the interest of meeting flood damage reduction requirements by 2004 and complying with the LCA, this Order does not include specific plans for setting back existing levees. However, the participants of the GWIWG recognize that current efforts towards setting back levees may not be exhaustive. If the Discharger's further investigations result in additional opportunities to set back levees, the Discharger will evaluate these opportunities in the interest of improving flood capacity, water quality, and beneficial uses of the Guadalupe River. An Adaptive Management Team (AMT) was previously formed as a technical review panel for the Downtown Project. The AMT will continue to operate in its role reviewing the Downtown Project and will also act as a review panel for the Lower Guadalupe River Project. Proposals to set back levees will be reviewed for technical feasibility by the AMT and submitted to the Executive Officer for approval.

23. **Guadalupe River Baylands Restoration Agreement:** Participants of the GWIWG have suggested that the Discharger investigate the feasibility of restoring the delta of the Guadalupe River in the Baylands where Cargill salt evaporator ponds currently operate. Goals of restoring the Guadalupe River delta include increased flood capacity of the lower Guadalupe River, and improved habitat in the Baylands in the area surrounding the mouth of the Guadalupe River. It has been recognized by the GWIWG that an effort to restore the delta of the Guadalupe River is beyond the scope of the current Project due to the level of planning required, uncertainties regarding land availability, current available resources, and conflicts between the amount of time required for completion and the LCA with the Corps.

The Discharger has agreed to active involvement in future discussions and planning pertaining to acquisition and restoration efforts in the Baylands, particularly in the vicinity of the mouth of the Guadalupe River. In recognition of this agreement, if parcels in the Baylands become available for restoration, and are determined to be in locations that would conform to restoration efforts of the Guadalupe River delta, then the Discharger will determine how it can best serve this effort while increasing flood capacity and meeting regional habitat restoration goals in the Baylands.

Regulatory Framework

24. The Board, on June 21, 1995, adopted, in accordance with Section 13244 et. seq. of the California Water Code, a revised Water Quality Control Plan, San Francisco Bay Basin (Basin Plan). The State Water Resources Control Board and the Office of Administrative Law approved this updated and consolidated revised Basin Plan on July 20, 1995, and November 13, 1995, respectively. A summary of the revisions to the regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. This Order is in compliance with the Basin Plan.
25. In accordance with Section 13050(d) of the California Water Code, “ ‘Waste’ includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin...” The Board has determined that the discharge of sediment related to construction activities and the discharge of sediment associated with incidental fall back related to dredging activities into “Waters of the State” as defined in Section 13050(e) of the California Water Code, are defined as waste and require the Discharger to file a report of waste discharge with the Board in accordance with Section 13260(a)(1) of the California Water Code. The Discharger filed a report of waste discharge on April 8, 2002.
26. The Basin Plan Wetland Fill Policy establishes that there is to be no net loss of wetland acreage and no net loss of wetland value when a project and any proposed mitigation are evaluated together, and that mitigation for wetland fill projects is to be located in the same area of the Region, wherever possible, as the project. The Project complies with the Policy. The Policy further establishes that wetland disturbances should be avoided whenever possible, and if not possible, should be minimized, and only after avoidance and minimization of impacts should mitigation for lost wetlands be considered. The Discharger has submitted documentation to show that appropriate effort was made to avoid and then to minimize the Project’s wetland disturbance, as required by the Basin Plan. The Board concurs with this finding.
27. Pursuant to California Water Code Section 13263 and Title 23, California Code of Regulations Section 3857 and 3859, the Board is issuing WDRs and Water Quality Certification for the Project.
28. The Board has notified the Discharger and interested parties of its intent to issue WDRs and Water Quality Certification for the Project.
29. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
30. Certification is conditioned upon total payment of any fee required under 23 CCR and owed by the Discharger.
31. A discharge of water (effluent) could result from the handling and placement of excavated material at an off-site temporary stockpile site (if used). Any effluent

discharged during material placement and temporary storage is referred to as “decant water.” This Order regulates effluent discharged as a result of excavated material placement and temporary storage as described in Provision D.13. of this Order.

IT IS HEREBY ORDERED that, with the implementation of the following conditions and requirements, the Board certifies that the Project described herein will comply with the applicable provisions of sections 301, 302, 303, 306 and 307 of the Clean Water Act. It is further ordered that, pursuant to California Water Code sections 13263 and 13267, the Discharger shall comply with the following:

A. Discharge Prohibitions

1. Project activities that result in the direct discharge of waste, as described in Section 13050(d), of the California Water Code, from construction sites to surface waters or surface water drainage courses are prohibited.
2. Project activities subject to these requirements shall not cause a nuisance as defined in Section 13050(m) of the California Water Code.
3. Excavated material shall remain within designated disposal areas at all times. The designated disposal areas are: (a) an off-site temporary or permanent location in accordance with federal and state regulations, (b) any on-site temporary location provided material will be isolated and contained to prevent impacts to jurisdictional waters and beneficial uses, or (c) a permitted landfill.
4. The discharge of decant water from any temporary excavated material stockpile or storage areas to surface waters or surface water drainage courses outside of the active excavation site is prohibited except where BMPs are adopted to comply with effluent and receiving water limitations.
5. Groundwater beneficial uses shall not be degraded as a result of the Project.

B. Effluent Limitations

Wastewater (decant water and/or runoff water), and diverted water that drains to waters of the State shall not exceed the following limits of quality at any time:

pH: 0.5 pH units above or below ambient levels
Settleable matter: 1.0 ml/l/hr
Dissolved sulfide: 0.1 mg/l

C. Receiving Water Limitations

1. The Project’s activities shall not cause:
 - a. The temperature of any waters providing cold or warm freshwater habitat to be increased by more than 5° F above natural temperatures unless a qualified biologist

can demonstrate that such alteration in temperature does not adversely affect beneficial uses.

- b. Floating, suspended or deposited macroscopic particulate matter or foam in waters of the State at any place more than 100 feet from the point of discharge of diverted flow or decant water.
 - c. Alteration of apparent color beyond present natural background levels in waters of the State at any place more than 100 feet from the point of discharge of diverted flow or decant water.
 - d. Visible floating, suspended, or deposited oil or other products of petroleum origin in waters of the State at any place more than 100 feet from the point of discharge of diverted flow or decant water.
 - e. The diverted flow or decant water shall not cause waters of the State to exceed the following water quality limits at 100 feet downstream from the point of discharge of diverted flow or decant water:
 - i. Dissolved Oxygen: 7.0 mg/l minimum. When natural factors cause lesser ambient concentrations, then the discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - ii. pH: A variation of natural ambient pH by more than 0.5 pH units.
 - iii. Toxic or other deleterious substances: None shall be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.
2. Turbidity of the waters of the State, as measured in NTUs, 100 feet downstream from the point of discharge of diverted flow and decant water, shall not increase above background levels by more than the following at any time:

<u>Receiving Waters Background</u>	<u>Incremental Increase</u>
< 50 units	5 NTUs
≥ 50 units	10% of background, maximum

D. Provisions

General Provisions

1. The Discharger will comply with this Order, in its entirety, immediately upon adoption of this Order except where Provisions of this Order specify alternative compliance dates.

2. All plans and reports pursuant to these Provisions shall be prepared under the supervision of a suitable professional registered in the State of California.
3. Project impacts shall not exceed amounts listed in Table 1 of this Order.
4. Construction in the Guadalupe River, below ordinary high water (2.33 year flood recurrence interval) will be limited to the summer dry season between May 1 and October 15 of each year, to prevent impacts to steelhead trout and Chinook salmon, unless notification and approval by the Executive Officer are received in advance.
5. The Discharger is responsible for correcting any and all problems which arise in the event of Project failure, including a failure to meet the conditions of this Order, that result in an unauthorized release of waste or wastewater.
6. Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR Subsection 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
7. This Order does not authorize commission of any act causing injury to the property of another or of the public; does not convey any property rights; does not remove liability under federal, state or local laws, regulations or rules of other programs and agencies nor does this Order authorize the discharge of wastes without appropriate permits from other agencies or organizations.
8. The Discharger shall comply with all necessary approvals and/or permits for the Project from applicable government agencies, and shall submit copies of such approvals and/or permits to the Executive Officer prior to Project implementation.
9. The Discharger shall ensure that all individuals working on Project work sites, including any and all contractors and sub-contractors, are familiar with the contents and requirements of this Order, and all relevant plans and BMPs, and shall keep copies of these documents at Project work sites so as to be readily available at all times to operating personnel and workers.
10. Every certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section 13330 of the California Water Code and 23 CCR Section 3867.
11. The Discharger shall permit the Board or its authorized representative, upon presentation of credentials:
 - a. Entry on to the premises on which Project activities are planned or underway, wastes are located, or in which records are kept.

- b. Access to copy any records required to be kept under the terms and conditions of this Order.
- c. Access to inspect any treatment equipment, monitoring equipment or monitoring method required by this Order.
- d. Access to sample any discharge or surface water covered by this Order.

Sediment Removal and Vegetation Management Provisions

- 12. The Discharger may temporarily stockpile excavated material prior to disposal or reuse provided that appropriate BMPs are implemented to protect water quality and beneficial uses. The excavated material may be stockpiled on-site for Project reuse or for loading into trucks for off-site disposal. The Discharger shall contain temporary on-site stockpiled material so that runoff, sediment, or decant water from the excavated material will not contact waters of the State outside the active excavation site without first being treated to meet receiving water limitations described in this Order.
- 13. The Discharger shall ultimately dispose of dewatered excavated material at a permitted landfill, upland disposal site, or at a reuse site in accordance with applicable state and federal regulations including applicable provisions of this Order and the Downtown Guadalupe Flood Control Project Mitigation and Monitoring Plan mercury level requirements, pages 2-23 and 2-24.
- 14. A delineation of existing jurisdictional waters of the State and United States at any temporary excavated material disposal site verified according to U.S. Army Corps of Engineers delineation standards shall be conducted by a qualified biologist prior to the construction of an impoundment at the site and submitted to the Executive Officer prior to the disposal of excavated material at the site(s).
- 15. The Discharger shall allow natural recruitment of vegetation in all vegetation management areas and will implement vegetation maintenance guidelines as outlined in the Project Engineer's Report dated June 2002.

Water Quality Provisions

- 16. The Discharger shall implement BMPs to prevent pollutants from draining into waters of the State, including the discharge of pollutants from temporary stockpiles of excavated material, during transport of excavated material, from application of herbicides and pesticides, and from vegetation and construction related materials.
- 17. The Discharger shall remove and properly dispose of any wastes that are discharged at any Project work sites in violation of this Order.

18. The discharge of any hazardous, designated or non-hazardous waste as defined in Title 27, Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations shall be conducted in accordance with applicable state and federal laws and regulations.
19. The Discharger shall file with the Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the designed disposal areas.
20. To prevent surface erosion and sedimentation, disturbed soil related to Project activities will be stabilized, winterized, and revegetated with appropriate native vegetation or appropriate non-native sterile seed mix no later than October 15th, without notification and approval of the Executive Officer of a later date.
21. The Discharger shall divert any flow at the site (hereinafter diverted flow) around the active Project work site in a non-erosive manner using a pipe, or other BMP measure such that the flow does not flow across active work sites.
22. If dead or dying fish or fish exhibiting stress are observed within 1,000 feet of Project work activity or discharge, the Discharger shall immediately assign a qualified biologist to investigate the cause of the problem and define an acceptable corrective action plan. If the cause is related to Project activities, the Discharger shall halt work activities until an acceptable corrective action plan can be implemented. The Discharger shall immediately report all incidences involving dead or dying fish or fish exhibiting stress, as well as prescribed action plans to the Board and the California Department of Fish and Game.
23. Pursuant to California Water Code Section 13267, the Discharger shall submit a pumping plan and a water quality assessment to the Executive Officer six months after adoption of this Order, describing methods and locations of post-flood salt pond pumping along Alviso Slough and any anticipated water quality impacts that may result from salt pond discharges. If it is determined that water quality impacts may occur, the Discharger shall develop a contingency plan to avoid impacts to water quality and beneficial uses.

Mitigation, Monitoring and Reporting Provisions

24. The Discharger shall comply with the MMP as described in Findings 18 and 21 of this Order and with any changes to the MMP developed by the AMT and approved by the Executive Officer.
25. If compensatory mitigation has not developed in accordance with the performance criteria established in the MMP by year 10 after project completion, the Discharger shall prepare a revised mitigation plan acceptable to the Executive Officer, addressing corrective action, outlining additional monitoring, or proposing new mitigation that will comply with the MMP's performance criteria. The revised mitigation plan will be

submitted for Executive Officer approval no later than 90 days following the final 10-year monitoring report.

26. The Discharger shall sequence construction such that riparian mitigation planting will begin in fall /winter 2003 and be completed by fall/winter 2004. The Discharger shall submit a letter documenting compliance with this Provision, following riparian planting activities for each year.
27. No later than 60 days prior to the start of construction for each phase of the Project, the Discharger will submit 90% design plans to the Executive Officer, with the exception in Provision D.28.
28. The Discharger shall submit to the Executive Officer for approval, 60% design plans for the bed stabilization structures in Reach A, no later than 60 days prior to construction.
29. The Discharger shall develop and implement a Guadalupe River Watershed Sediment Source Identification and Reduction Program (Program) to identify and control significant sediment sources in the Guadalupe River Watershed. The primary objective of the Program will be to reduce the need for sediment removal activities described in Finding 8 of this Order, and associated impacts to water quality and beneficial uses in the reaches of the Project. The Discharger, in cooperation with Board staff , shall develop this Program to identify locations within the Guadalupe River Watershed where sediment inputs are considered significant contributors to downstream sediment deposition. The Program will identify measures, including but not limited to regulatory authority of the Board, to control identified sediment sources. A Program plan shall be submitted to the Executive Officer for approval no later than six months following the date of this Order. Program implementation shall begin no later than one year following the date of this Order.

Adaptive Management

30. Pursuant to California Water Code Section 13267, the Discharger shall submit a technical report to the Executive Officer six months following adoption of this Order, describing efforts to identify and pursue opportunities to set back levees along the lower Guadalupe River within the footprint of the Project. The Executive Officer will review the report and respond in writing whether additional actions and reports are required to meet the goals of the Setback Levee Agreement described in Finding 22 of this Order.
31. Pursuant to California Water Code Section 13267, the Discharger shall submit a technical report to the Executive Officer one year following adoption of this Order, describing efforts to identify and pursue opportunities to restore the delta of the Guadalupe River in the Baylands. The Executive Officer will review the report and respond in writing whether additional actions and reports are required to meet the goals of the Guadalupe River Baylands Restoration Agreement described in Finding 23 of this Order.

I, Loretta Barsamian, Executive Officer, do hereby certify that the foregoing is a full, complete and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on September 18, 2002.

Loretta Barsamian
Executive Officer

Appendices:

- A. Map of Related Projects
- B. Map of Project Area
- C. Lower Guadalupe River Flood Protection Project Mitigation and Monitoring Plan
- D. Map of Wetland Mitigation Site
- E. GWIWG Participants